

REMARKS

Reconsideration of the present application is respectfully requested. In this response, all previously pending claims have been canceled. Claim 38 has been canceled. Claims 37, 46 and 52 have been amended. Claims 56-59 are new.

AMENDMENT TO THE SPECIFICATION

Paragraph [105] of the specification has been amended to correct a minor error that was inadvertently introduced in the last amendment.

SUMMARY OF THE OFFICE ACTION

In the Office Action, claims 39 and 46 were rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. Claims 37-39, 42 and 46-54 were rejected under 35 U.S.C. 103(a) as being obvious based on U.S. Patent No. 6,366,970 to Wolff et al. ("Wolff") in view of U.S. Patent Application Publication having Publication No. 2001/0034786 to Baumeister et al. ("Baumeister") and U.S. Patent No. 6,744,763 to Jones et al. (hereinafter, "Jones") and further in view of U.S. Patent Application Publication No. 2002/0056126 of Srikantan et al. (Srikantan"). Claim 45 was rejected under 35 U.S.C. 103(a) based on Wolff in view of Baumeister and further in view of U.S. Patent Application Publication No. 2002/0181506 of Loguinov.

RESPONSE TO REJECTIONS

Section 112 Rejections

The rejection under 35 U.S.C. § 112, second paragraph, are believed to be moot in view of the above claim amendments.

Prior Art Rejections

The present invention generally relates to a network cache that operates on a network in a client-server environment, to provide streaming media data to requesting clients. The network cache supports a plurality of streaming media protocols. As such, it includes a subsystem to stream media data to a client, and this subsystem is dependent upon the streaming media protocol. The network cache also includes a subsystem to read the streaming media data from a storage facility (such as a mass storage device), however, this subsystem is independent of the streaming media protocol.

By providing a separate protocol independent subsystem for reading streaming media data from storage, the present invention allows storage and retrieval operations to be generalized and optimized, thus providing for more efficient data retrieval and transmission of streaming media data in response to client requests. See Applicants' specification, para. [105].

To establish a prima facie case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the

reference or to combine reference teachings. Second, there must be a reasonable expectation of success. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. In re Vaeck, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

The present application, as amended, includes three independent claims, i.e., claims 37, 42 and 52. The invention recited in claims 37, 46 and 52 is not obvious in view of the references cited by the Examiner, whether they are taken individually or in combination, at least because the cited references do not disclose or suggest every limitation of any of these claims, individually or in combination. No combination of the teachings of the cited references would produce the present invention as a whole.

For example, claim 37 as amended recites

37. (Previously presented) A computer system comprising:
a processor;
a storage facility coupled to the processor; and
program code, for execution by the processor, to implement:
a first plurality of interfaces to initiate reading of packet meta-
data and packets of payload data from the storage facility; and
a second plurality of interfaces to output streaming media
packets to a requesting client system on a network, wherein the second
plurality of interfaces collectively support a plurality of streaming media
protocols, wherein the streaming media packets comprise the packet meta-
data and the packets of payload data and are determined in response to a
streaming media protocol requested by the client system, and wherein the first
plurality of interfaces are streaming media protocol independent and the
second plurality of interfaces are streaming media protocol dependent.

Claim 37 has been amended essentially to incorporate the limitations of dependent claim 38 (now canceled). Accordingly, Applicants remarks shall address the rejections of both claim 38 and 39.

As a preliminary matter, Applicants note that, although the rejection is ostensibly based on the combination of Wolff, Baumeister, Jones and Srikantan, the Office Action does not discuss either Baumeister or Jones in connection with claim 37 or 38. Therefore, it is not apparent how Baumeister and Jones are being applied in the rejection of those claims, if at all. In the event the rejection is maintained, Applicants request that this be clarified in the next Office Action.

The present invention is not obvious based on the cited art for at least the following reasons:

1) In the rejection of claim 37, the Office contends that Wolff discloses at col. 4, lines 5-12, the recited “second plurality of interfaces to output streaming media packets to a requesting client system”. Applicants respectfully disagree. Wolff does not disclose any interfaces to output streaming media packets to a requesting client system.

Wolff relates to a technique for using memory more efficiently in a computer system when processing streaming media data. Although it is understood that the streaming media data must be received from somewhere, such as a remote entity, the technique disclosed in Wolff is solely concerned with the internal processing of streaming media within a computer, as expressly stated at, e.g., col. 1, lines 67; col. 2, line 5; col. 3 line 22; and col. 4, line 47. Although Wolff refers to a “downstream processing unit, which in the preferred embodiment

is usually a digital audio/video decoder” (col. 4; lines 7 -10), the “downstream processing unit” is within the same computer, as is clear from the entire disclosure (including but not limited to the lines cited above). Further, the mere fact that a given component receives data from an “upstream” component does not make it a “client”. Hence, nowhere does Wolff disclose a processing system that includes, *inter alia*, a (second) plurality of interfaces to output streaming media packets to a requesting client system.

2) One of ordinary skill in the art would not attempt to combine the teachings of Wolff and Srikantan in trying to achieve the present invention. The present invention specifically relates to a technique and an apparatus that provides streaming media data to a client system in a client-server architecture (as denoted by, *inter alia*, the “second plurality of interfaces to output streaming media packets to a requesting client system on a network” in claim 37). Because Wolff is solely concerned with the internal processing of streaming media within a particular computer and is not concerned with how the streaming media data is served over a network, Wolff provides no teachings that are relevant to the present invention or to any combination with Srikantan that is relevant to the present invention.

3) In the rejection of claim 38, the Office Action states (p. 5, para. “12.”):

Regarding claim 38, Wolff discloses the first plurality of interfaces being independent of a streaming media protocol, the packet meta-data and packets of payload data are not reliant upon a certain protocol, and Srikantan discloses the dependence upon a streaming media protocol in order for the second plurality of interfaces to distribute media data to clients (p. 2, para. [0027]).

Applicants respectfully disagree. First, assuming *arguendo* Wolff discloses “a first plurality of interfaces to initiate reading of packet meta -data and packets of payload data from the storage facility,” Wolff does not disclose that the “first plurality of interfaces” are independent of streaming media protocol, as the Office contends. Wolff is completely silent on the issue of whether streaming media data are read from storage in a streaming media data protocol dependent manner or independent manner (which is not surprising, since Wolff is not concerned with how streaming media data is transmitted over a network). One could just as easily assume that the “first plurality of interfaces” in Wolff (assuming Wolff discloses them) are streaming media protocol dependent as to assume that they are streaming media protocol independent.

Further, it is not clear from the Office Action exactly what features or elements in Wolff the Examiner considers to be the “first plurality of interfaces” in claim 37. The Office Action cites col. 3, lines 55-60 and col. 4, lines 31-35 as disclosing this claim element. However, those lines merely discuss an “input thread” and a “data block object”, respectively. Applicants do not see how those lines relate to the recited “first plurality of interfaces”. In the event the Examiner decides to maintain the rejection, Applicants request that the Examiner state exactly what features or elements in Wolff the Examiner considers to be the recited “first plurality of interfaces”.

4) Even assuming *arguendo* Wolff discloses the streaming media independent “first plurality of interfaces” and that Srikantan discloses the streaming media dependent “second plurality of interfaces” of claim 37, it would not be obvious to provide these elements together as subsystems of a single processing system that provides streaming media data

to a client on a network. There is no motivation or suggestion in the prior art as to why this would be desirable.

In this regard, the Office Action states that “[t]he rationale used above in the rejection of claim 37 for the combination of Wolff and Srikantan applies equally as well to claim 38” (Office Action p. 5, para. “12.”). However, the alleged motivation given by the Examiner for claim 37 is irrelevant to the additional limitations of claim 38 (now incorporated into claim 37). The motivation stated by the Examiner for claim 37 is: “to provide diverse clients with a wide range of different protocols so that different clients could have media streamed to them without problems of incompatibility” (Office Action p. 5, para. “11.”). That does not explain how the prior art provides any suggestion or motivation to provide a processing system in which the interfaces that initiate reading of packet meta-data and packets of payload data from storage should be streaming media independent, while the interfaces (in the same processing system) that output streaming media packets to a requesting client system are streaming media dependent. The prior provides no such motivation or suggestion.

For at least the above reasons, claim 37 and all claims which depend on it are believed to be patentable over the cited art.

Independent claims 46 and 52 contain limitations similar to those discussed above (and additional limitations) and, therefore, are believed to be patentable over the cited art along with their dependent claims, for similar reasons.

DEPENDENT CLAIMS

In view of the above remarks, a specific discussion of the dependent claims is considered to be unnecessary. Nonetheless, Applicants would like to address the Examiner comments regarding dependent claim 39.

In rejecting claim 39, the Office Action states (p. 5, para. “13.”):

However, it is deemed well known in the art the computer processors can run at many different speeds and it is very unlikely that two processors will run at the same exact speed due to many factors, including workload and overall total processing power of the computer processor. Therefore, the Examiner takes **official notice that the reading of packet meta-data and packets of payload data will be read at a different speed of [sic] the streaming media being transmitted to a client machine.** (Emphasis added.)

Applicants respectfully submit that the Office appears to have misunderstood claim 39. First, please note that claim 39 has been amended to depend on new claim 56. New claim 56 provides that the streaming media packets are read from the storage facility asynchronously with respect to outputting the streaming media packets to the client on the network. Support for this limitation can be found in Applicants’ specification as filed in, for example, paragraphs [110], [111] and [129] – [131]. Applicants do not believe this feature is disclosed or suggested in the cited art. Note that similar limitations are recited in claim 46 (as amended) and in new claim 58.

The Office takes official notice that “the reading of packet meta-data and packets of payload data will be read at a different speed of [sic] the streaming media being transmitted to a client machine.” However, claim 39 does not recite that the speeds are different – it recites that they are independent of each other. The phrase “independent of” does not

necessarily mean “different from”. Hence, it is possible that the pace of reading data from storage can be identical to, yet independent of, the pace of streaming to a client.

Even if the actual speeds are different in a given implementation, in the prior art the speed of streaming data to the client would still (it is believed) be dependent upon the maximum speed at which the data can be read from storage. This is because in the prior art, the process of reading streaming media data from storage and the process of streaming the data to the client are synchronous, not asynchronous. Therefore, the Office’s rationale is in error.

Further, the Office’s rationale for rejecting claim 39 assumes the use of at least two processors. However, none of the claims recites that multiple processors perform the operations in question (although neither do they exclude that possibility), so the rejection of claim 39 is further in error for this reason.

For the above reasons, therefore, the rejection of claim 39 is believed to be improper.

Note that Applicants’ silence regarding the other dependent claims does not represent agreement with, or acquiescence to, the rejections of those claims and is not to be interpreted as such, nor do Applicants waive any arguments regarding those claims.

CONCLUSION

For the foregoing reasons, the present application is believed to be in condition for allowance, and such action is earnestly requested.

If there are any additional charges, please charge Deposit Account No. 02-2666.

Respectfully submitted,
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